

Material safety data sheet

ELISA kit

1. Identification of the product (substance or mixture) and supplier/company

Product identifier

Product: ELISA kit
Catalogue no.: Please see section 16 for the exact products for which this MSDS applies.
Brand: U-CyTech biosciences

Relevant identified uses of the product and uses advised against

Identified uses: Laboratory reagent. To be used in ELISA system.
For R&D use only, not for food, drug, household or other uses.

Details of the supplier of the material safety data sheet

Supplier: U-CyTech biosciences
Yalelaan 48
3584 CM Utrecht
The Netherlands
Phone: +31 85 073 1460
E-mail: info@ucytech.com

2. Hazard identification

Classification of the products in this kit

The items in this kit are not classified as hazardous according to Regulation (EC) no. 1272/2008.

Label elements

Pictogram: none
Signal word: none
Hazard statement(s): none
Precaution statement(s): none

Other hazards - none

3. Composition/information on ingredients

Product name: ELISA kit

Ingredients:

Cas no.	EC no.	Index no.	Classification	Concentration
Coating antibody (lyophilized)				
-	-	-	-	-
Standard (lyophilized)				
-	-	-	-	-
Biotinylated detector antibody (lyophilized)				
-	-	-	-	-
SPP conjugate (lyophilized)				
-	-	-	-	-
TMB substrate solution (C₁₆H₂₀N₂)				
-	-	-	-	-
Stop solution (H₂SO₄)				
-	-	-	-	-
BSA stock solution (10%)				
-	-	-	-	-
Cytokine Stabilization Buffer				
-	-	-	-	-
Tween-20 (C₅₈H₁₁₄O₂₆)				
-	-	-	-	-

For specific ingredients of all items in this kit, see section 16 of this material safety data sheet (MSDS).

4. First aid measures

Description of first aid measures

- General advice: Consult physician. Show this MSDS to the doctor in attendance.
- After contact with skin: Wash contaminated area with soap and water. Remove contaminated clothing and shoes. Consult a physician.
- After swallowing: Do NOT induce vomiting (when swallowing TMB substrate solution or Stop solution). In general, if the person is conscious, wash out mouth with water. Consult a physician.
- After contact with eyes: Rinse thoroughly with plenty of water for at least 15 minutes. Assure adequate flushing by separating the eyelids. Consult a physician.
- After inhalation: Provide fresh air. If breathing becomes difficult, consult a physician.

Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Indication of any immediate medical attention and special treatment needed

No data available.

5. Fire-fighting measures

Extinguishing media: Water spray, carbon dioxide, dry chemical powder or alcohol-resistant foam.

Special hazards /risks: Except for Tween-20 there is no data available.

Tween-20:

Vapors heavier than air.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapors possible in the event of fire. In case of fire carbon oxides may develop.

Advice for fire fighters: Wear self-contained breathing apparatus and protective clothing for fire fighting if necessary.

6. Accidental release measures

Personal precautions: Use personal protective equipment to avoid exposure. Avoid formation of dust and aerosols. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation. Follow general safety rules for laboratories. Evacuate personnel to safe areas in case of an emergency.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Clean-up methods: Pick up and arrange disposal without creating dust. Absorb spilled liquid. Sweep up and keep in suitable, closed containers for disposal (section 13).

7. Handling and storage

Safe handling: Only for laboratory use. Use personal protective equipment to avoid (prolonged or repeated) exposure. Avoid formation of dust and aerosols. Ensure adequate ventilation. Follow general safety rules for laboratories.

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Safe storage: Store all items except SPP conjugate and Tween-20 at 2-8°C in a dry and well-ventilated place. Keep containers tightly closed and upright to prevent leakage. Protect TMB substrate solution from light.

Store SPP conjugate at -20°C protected from light in a dry and well-ventilated place. Keep container tightly closed and upright to prevent leakage.

Store Tween-20 in a cool, dry and well-ventilated place. Keep containers tightly closed and upright to prevent leakage. Protect Tween-20 from light.

8. Exposure controls/personal protection

Contains no substances with occupational exposure limit values.

Appropriate engineering controls and hygiene measures

Facilities storing or utilizing this product should be equipped with an eyewash facility, a safety shower and mechanical exhaust. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

Personal protective equipment

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

The selected safety glasses have to have side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and body protection

The selected clothing has to be impervious.

9. Physical and chemical properties

Coating antibody, standard, biotinylated detector antibody and SPP conjugate:

Physical state and appearance:	solid (lyophilized)	Color:	white
Odor:	no data available	pH (at 20°C):	no data available
Melting/freezing point:	no data available	Boiling/condensation point:	no data available
Flash point:	no data available	Auto ignition temperature:	no data available
Flammability limits:	no data available	Specific gravity:	no data available
Solubility:	soluble in water		

TMB substrate solution:

Physical state and appearance:	liquid	Color:	transparent
Odor:	none	pH (at 20°C):	no data available
Melting point:	no data available	Boiling/condensation point:	- 100°C
Flash point:	no data available	Auto ignition temperature:	no data available
Flammability limits:	no data available	Specific gravity:	no data available
Solubility:	soluble in water		

Stop solution:

Physical state and appearance:	liquid	Color:	transparent
Odor:	no data available	pH (at 20°C):	no data available
Melting/freezing point:	no data available	Boiling/condensation point:	no data available
Flash point:	no data available	Auto ignition temperature:	no data available
Flammability limits:	no data available	Specific gravity:	no data available
Solubility:	soluble in water		

BSA stock solution (10%) and Cytokine Stabilization Buffer:

Physical state and appearance:	liquid	Color and form:	transparent, light yellow
Odor:	no data available	pH (at 20°C):	no data available
Melting/freezing point:	no data available	Boiling/condensation point:	no data available
Flash point:	no data available	Auto ignition temperature:	no data available
Flammability limits:	no data available	Specific gravity:	no data available
Solubility:	product is an aqueous solution		

Tween-20:

Physical state and appearance:	liquid to viscous	Color:	yellowish
Odor:	no data available	pH (at 20°C):	7
Melting/freezing point:	no data available	Boiling/condensation point:	100°C
Flash point:	> 110°C - closed up	Auto ignition temperature:	no data available
Flammability limits:	no data available	Density (at 25°C):	1.95 g/ml
Solubility:	soluble in water	Vapor pressure	< 1.33 hPa

10. Stability and reactivity

Chemical stability: Stable under recommended storage conditions.

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Conditions to avoid: No data available for all items except for TMB substrate solution were excessive heating and freezing need to be avoid.

Materials to avoid: Bases, halides, oxidizing agents, strong oxidizing agents, strong acids, reducing agents, heavy metal salts, strong reducing agents, alkalis, acrylonitrile.

Hazardous reactions/decomposition products: No data available for all items except for Tween-20 were hazardous decomposition products are formed under fire conditions: carbon oxides.

11. Toxicological information

Acute toxicity: Tween-20: LD₅₀ (oral, rat): 40.554 mg/kg.
 TMB substrate solution: LD₅₀ (oral, quail): 316 mg/kg.
 Stop solution: LD₅₀ (oral, rat): 2140 mg/kg.
 LC₅₀ (inhalation, rat, 2 h): 510 mg/m³.
 Other items: no data available.

Irritation and corrosion (skin and eyes): Tween-20: mild skin irritation (human, 3 d)
 Other items: no data available.

Sensitization (skin and respiratory): No data available.

Germ cell mutagenicity: No data available.

Carcinogenicity: Stop solution: IARC: 1 - Group 1: Carcinogenicity to human (sulfuric acid).

Tween-20: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Other items: no data available.

Reproductive toxicity: No data available.

Specific target organ toxicity (single and repeated): No data available.

Aspiration hazard: No data available.

Signs and symptoms of exposure:

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Potential health effects:

All items:

Inhalation: May be harmful if inhaled and may cause respiratory tract irritation.

Skin: May be harmful if absorbed through skin and may cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

Further hazardous properties cannot be excluded. The product should be handled with the care usual when dealing with chemicals.



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Additional information:

RTECS: Tween-20: TR7400000 - Others items: not available.

12. Ecological information

Toxicity: Tween-20: LC₅₀ (fish, 24h): 350 mg/l.
Stop solution: LC₅₀ (moquito fish, 96h): 42 mg/l.
Other items: no data available.

Persistence and degradability: No data available.

Bio accumulative potential: No data available.

Mobility in soil: No data available.

Results of PBT and vPvB assessment: No data available.

Other adverse effects: No data available.

13. Disposal considerations

Product: The generation of waste should be avoided or minimized wherever possible.
Dissolve or mix with a combustibile solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Observe all federal, state and local environmental regulations.

Packaging: Dispose of as unused product.

14. Transport information

This product is not dangerous for road (ARD), rail (RID), inland waterways (ADNR), sea (IMDG) and air (ICAO/IATA) transport. UN number is not available.

15. Regulatory information

Coating antibody, standard, biotinylated detector antibody, SPP conjugate, TMB substrate solution, Stop solution, BSA stock solution (10%), Cytokine Stabilization Buffer and Tween-20 are not classified as dangerous according to EU legislation.

16. Other information

Specific ingredients of the items in this kit

- Lyophilized coating antibody, standard, biotinylated detector antibody and SPP conjugate (when reconstituted with distilled water):

Cas no.	EC no.	Index no.	Classification	Concentration
Proteins (antibodies, cytokines or Streptavidin-Horseradish peroxidase polymer respectively)				
-	-	-	-	< 1%
Serum albumin (<i>this ingredient is not present in coating antibody</i>)				
9048-46-8	232-936-2	-	-	1%
Trehalose, dihydrate (C₁₂H₂₂O₁₁ • 2H₂O)				
6138-23-4	202-739-6	-	-	< 5%
Water				
7732-18-5	231-791-2	-	-	> 93%

- TMB substrate solution (synonym: 3,3',5,5'-Tetramethylbenzidine substrate solution):

Cas no.	EC no.	Index no.	Classification	Concentration
3,3',5,5'-Tetramethylbenzidine				
54827-17-7	259-364-6	-	Acute Tox 4; Skin Irrit. 2, Eye Irrit. 2; STOT SE; Aquatic Chronic; H302, H315, H319, H335; H411	< 0.02%
Water				
7732-18-5	231-791-2	-	-	> 95%

- Stop solution (synonym: 0.175 M Sulphuric acid):

Cas no.	EC no.	Index no.	Classification	Concentration
Sulphuric acid (H₂SO₄)				
7664-93-9	231-639-5	016-020-00-8	Skin Corr. 1A; H314	< 1%
Water				
7732-18-5	231-791-2	-	-	> 98%

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- BSA stock solution (10%) (synonym: Bovine Serum Albumin) and Cytokine Stabilization Buffer:

Cas no.	EC no.	Index no.	Classification	Concentration
Serum albumin				
9048-46-8	232-936-2	-	-	10%
Water				
7732-18-5	231-791-2	-	-	> 88%

Information regarding the specific chemical identity of Cytokine Stabilization Buffer is being withheld as a trade secret of the manufacturer. However, the product contains no other substances which at their given concentration, are considered to be hazardous to health and environment according to Regulation (EC) no. 1272/2008 and to Directive 1999/45/EC and its amendments.

- Tween-20 (Tween is a registered trade mark of Uniqema, a business unit of ICI Americas Inc.; synonyms: Polyoxyethylenesorbitan monolaurate, polyethylene glycol sorbitan monolaurate):

Cas no.	EC no.	Index no.	Classification	Concentration
Tween-20				
9005-64-5	500-018-3	-	-	-

Text of Hazard statements and Risk phrases mentioned in section 16

Acute Tox.	Acute toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Irrit.	Eye irritation
Skin Corr.	Skin corrosion
Skin Irrit.	Skin irritation
STOT SE	Specific target organ toxicity - single exposure
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H411	Toxic to aquatic life with long lasting effect

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This MSDS applies for the following U-CyTech ELISA kits (5-plate format)

(please find below the catalogue number of the ELISA kit)

Analyte	Species				
	Human	Old World Monkey	New World Monkey	Mouse	Rat
IFN- γ	CT201A	CT141A	CT340A	CT301A	CT071A
IL-1 β	CT526A	CT139A			
IL-2	CT202A	CT142A	CT344A	CT309A	
IL-4	CT203A	CT143A		CT306A	CT073A
IL-5	CT204A	CT144A		CT296A	
IL-6	CT205A	CT145A	CT346A	CT299A	
IL-7	CT523A				
IL-8	CT212A	CT151A			
IL-10	CT206A	CT146A		CT307A	
IL-12/23p40		CT149A	CT345A		
IL-12p70	CT210A				
IL-13	CT208A	CT147A	CT341A		
IL-17A	CT516A	CT501A	CT343A		
IL-17F	CT518A	CT503A			
IL-21	CT530A				
IL-23	CT517A	CT502A			
IL-27	CT524A				
IL-29	CT525A				
IL-31	CT520A				
IL-33	CT519A				
IP-10	CT522A	CT157A			
Angiopoietin-2	CT527A	CT158A			
G-CSF	CT389A				
GM-CSF	CT200A	CT140A			
Granzyme B	CT211A				
MCP-1	CT521A	CT156A			
Perforin	CT391A	CT154A			
TNF- α	CT209A	CT148A	CT342A	CT303A	CT075A
VEGF-A	CT529A				

Further information

- The information provided with this document is furnished in good faith and without warranty of any kind. Personnel handling this product must consider these data only as supplemental to other information gathered by them and must make independent determinations of its suitability and completeness of information from all sources to assure proper use and disposal of the materials and the safety and health of employees and customers. U-CyTech B.V. shall not be held liable for any damage resulting from handling or from contact with the above product.
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